



Sandia National Laboratories' International Biological Threat Reduction Iraq Program

SAND2011-6247C

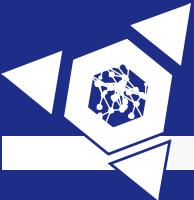
Melissa R. Finley, DVM, PhD
**International Biological Threat Reduction
Global Security Programs
Sandia National Laboratories**
September 2011

www.biosecurity.sandia.gov

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

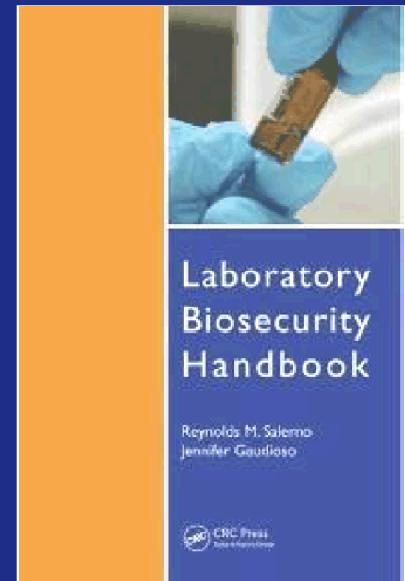
SAND # 2011-6247C





Sandia IBTR Mission and Goals

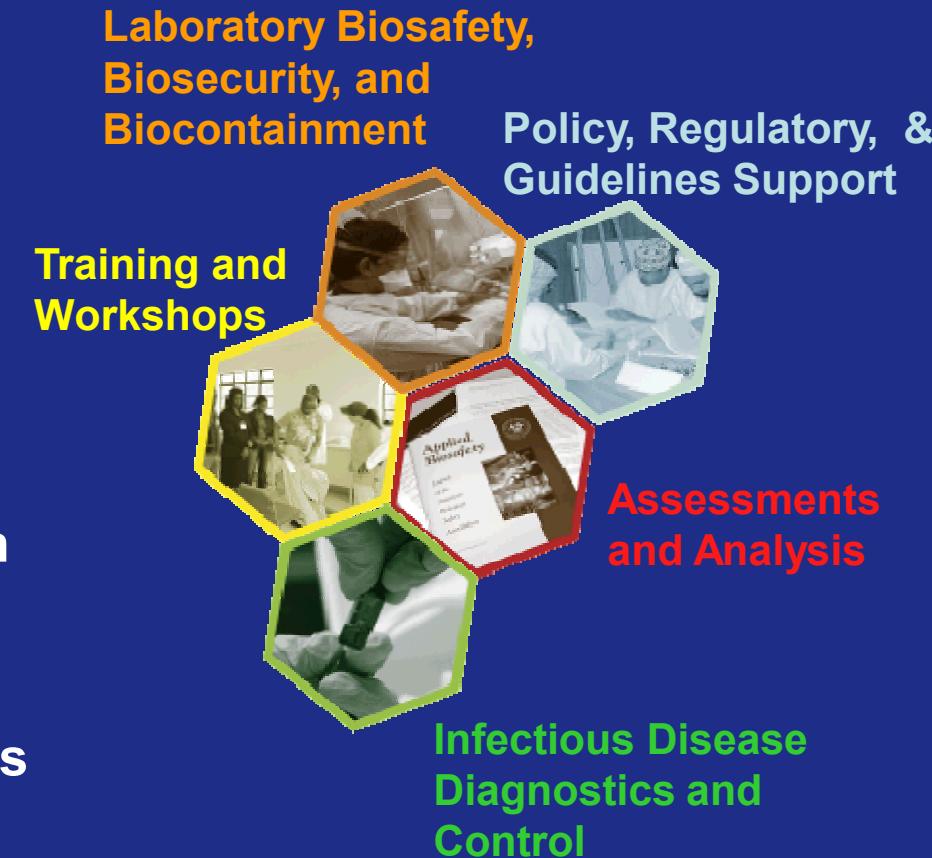
- **Mission: To enhance United States and international security by reducing biological threats worldwide**
- **IBTR's highest goals**
 - Enhance safety, security, and containment of dangerous biological agents in bioscience facilities
 - Strengthen capacities to detect and control dangerous biological agents
 - Improve understanding and mitigation of biological threats





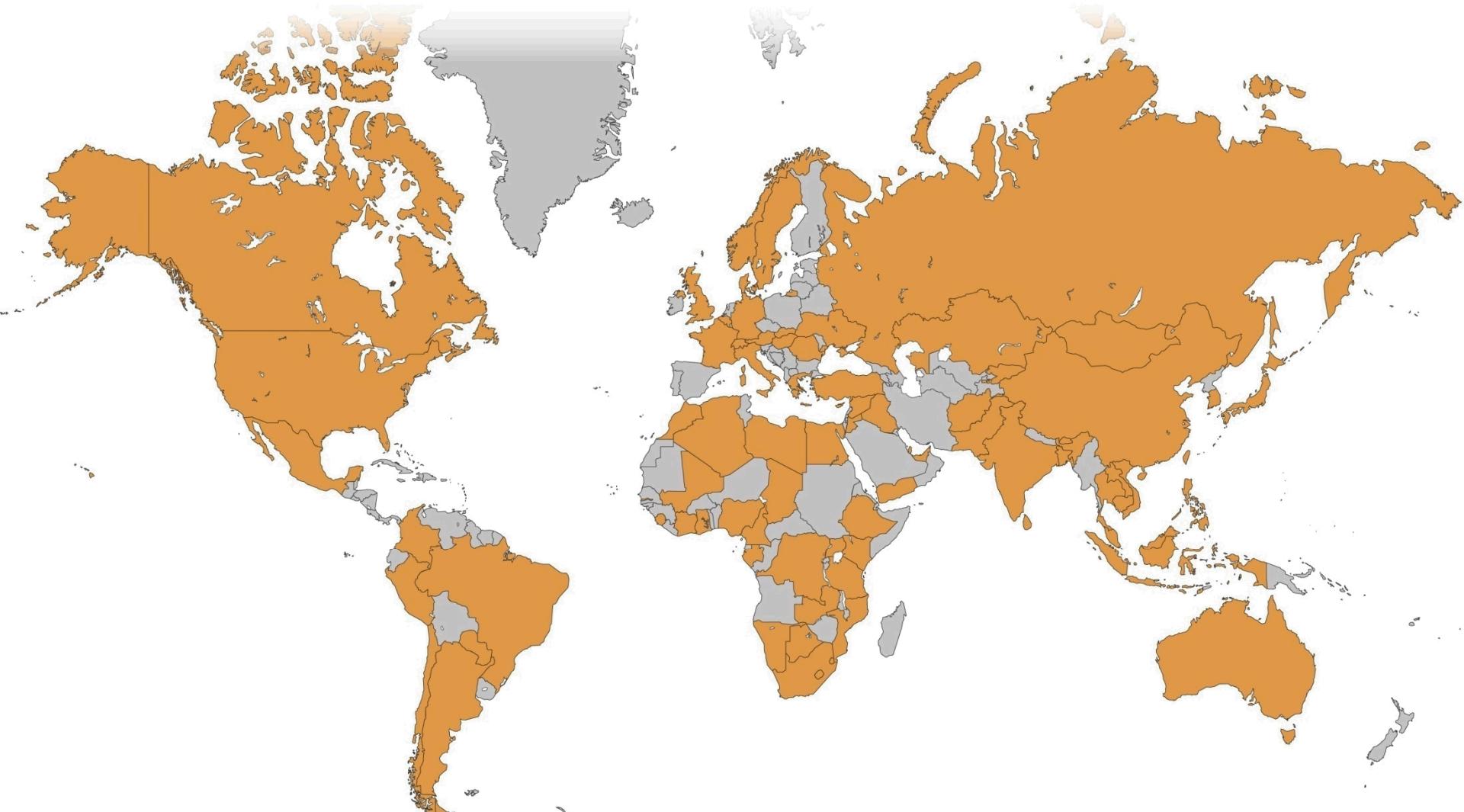
IBTR Program and Unique Technical Capabilities

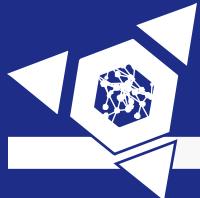
- **Laboratory biorisk assessments**
- **Biosecurity implementation**
- **Biorisk management training**
- **Biorisk systems implementation**
- **Integrated systems approach to biothreat identification, prevention, and response**
- **Building public and animal health capabilities in support of risk reduction**
- **Structured decision analysis tools**
 - Global/regional
 - National
 - Agent-specific





IBTR International Engagement To Date

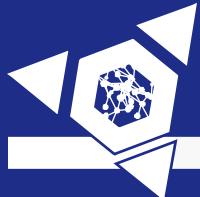




US Department of State

- **U.S. Department of State (DoS)**
- **Develops cooperative international programs that promote the safe, secure and responsible use of biological materials that are at risk of accidental release or intentional misuse.**
- **Focuses on scientific engagement of biomedical professionals, infectious disease experts, and research facilities that study infectious microorganisms**

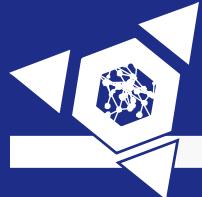




IBTR Activities in Iraq

- **Laboratory assessments**
- **General laboratory biorisk management training**
- **Design and implementation of physical security systems at priority laboratories in Baghdad**
- **Training on the use of molecular biotechnology**
- **Collaboration with the Al-Kindi Company for the Production of Animal Vaccines**
- **Technical collaboration to support the development of an Iraqi National Biosafety Committee**

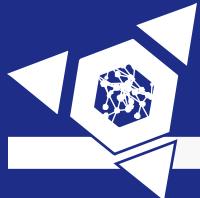




Biosafety and Biosecurity Assessments

- **Al-Kindi Company for the Production of Veterinary Vaccines**
- **The Central Veterinary Company**
- **The Central Public Health Laboratory**
- **The Transboundary Animal Disease Laboratory**
- **The University of Baghdad**
 - College of Science
 - College of Veterinary Medicine
- **Survey laboratories throughout Baghdad**





Laboratory Biosafety and Biosecurity Training

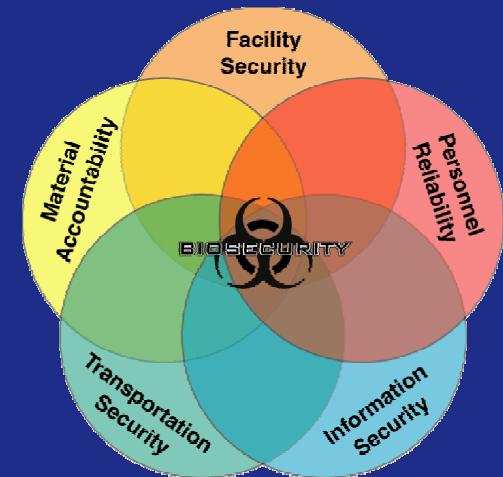
- **General Biosafety and Biosecurity Awareness**
 - Participants from the Ministry of Agriculture, Ministry of Health, Ministry of Higher Education, and Ministry of Science and Technology
- **Introductory Laboratory Biosafety and Biosecurity**
- **Biorisk management training**
 - Infectious pathogen shipping
 - Standard Operating Procedures Development Workshop
- **One year distance learning course to develop biosafety professionals in key laboratories (2012)**

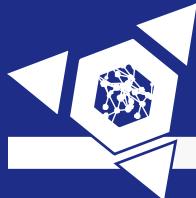




Provision of Biosecurity Systems to Diagnostic Labs

- **Plans to implement comprehensive biosecurity systems**
 - Central Public Health Laboratory
 - Central Veterinary Laboratory
 - Transboundary Animal Disease Laboratory
- **Raise awareness on laboratory biosecurity**
- **Begin to implement the components of biosecurity into laboratories in 2011 - 2012**
 - Physical security
 - Material accountability
 - Information security
 - Transportation security
 - Personnel reliability

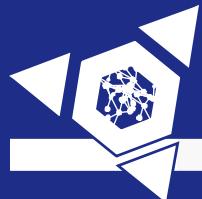




Biotechnology

- The use of modern molecular tools helps minimize pathogen handling and largely supports biosecurity efforts
- Provided training to Iraqi biomedical professionals at the Jordan University of Science and Technology (JUST)
 - Central Public Health Laboratory
 - College of Veterinary Medicine
- Plan to provide an additional advanced training in 2012





Scientific Engagement with the Al-Kindi Co.

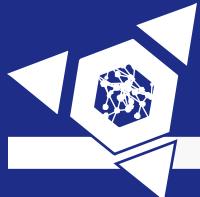
- **Technical engagement with the Al-Kindi Company**
 - Establish relationship with International or US collaborators
- **Supporting best laboratory practices**
 - Laboratory biosafety and biosecurity
 - Quality control
- **Laboratory capacity building**
 - Enhanced filling capabilities to support import of proven antigen
- **Staff training to support technical advancements**





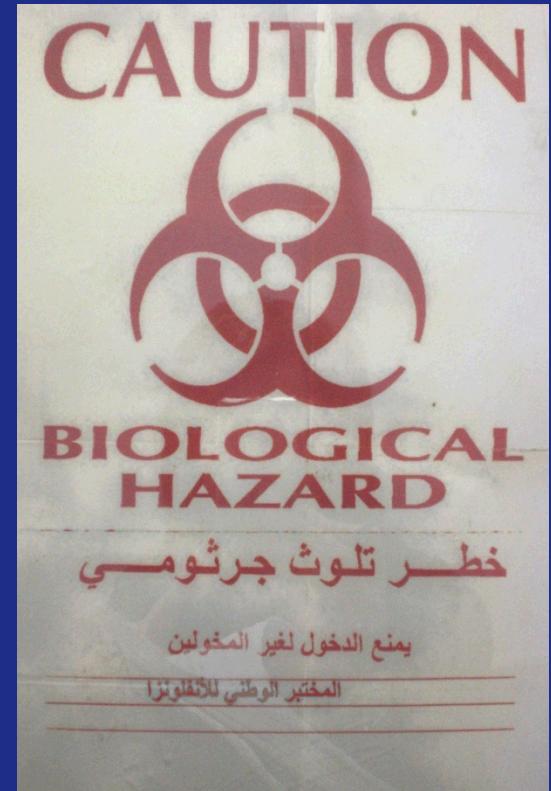
Building a National Committee for Biosafety

- **Working with the Prime Ministers Advisory Council, the Ministry of Health, and the Ministry of Science and Technology (National Monitoring Directorate)**
- **IBTR staff will meet with high level representatives from the Ministries of Agriculture, Environment, Health, Higher Education, and Science and Technology to establish:**
 - Bioscience community support
 - Mission
 - Objectives
 - Membership
 - Origin: governmental versus nongovernmental



Summary

- IBTR/DOS are collaborating with many Iraqi Ministries to build a culture of safe and secure laboratory practices
- To date we have engaged/trained many biomedical professionals and facilities and plan to continue to provide diverse training activities that supports biosafety and biosecurity in Iraq
- Future activities are aimed at building biosafety and biosecurity capacity at key laboratories in Iraq
 - Train the trainers
 - Expand outside of Baghdad to regional public health and agricultural laboratories and universities





Contact Information

Melissa R. Finley, DVM, Ph.D.

Sandia National Laboratories
PO Box 5800, MS 1363
Albuquerque, NM 87185
USA

Tel. 505-284-8176
email: mfinley@sandia.gov

www.biosecurity.sandia.gov